

independent form. In addition, the Office Action stated that drawings as filed are *informal*, and suitable for examination purposes only.

Regarding the drawings, Applicants respectfully submit that the filed drawings are in compliance with 37 C.F.R. §1.84. The drawings have not been objected to by the draftsman and should be accepted as formal drawings.

In regard to the rejection of Claim 1 under 35 U.S.C. §103(a), Claim 1 is directed to an apparatus for processing a television signal, comprising: (1) receiving means for receiving a television signal; (2) commercial candidate block detecting means for detecting a commercial candidate block; (3) measuring means for measuring a length of the commercial candidate block; (4) judgement means for making a judgement of whether the length of the commercial candidate block is within a predetermined range of an integral multiple of a standard length; and (5) determining means for determining whether the commercial candidate block is a commercial block according to the judgement.

The '818 patent is directed to a commercial detection apparatus that detects scene changes and soundless segments in a video signal. However, as admitted in the Office Action, the '818 patent fails to disclose the judgement means recited in Claim 1, and the Office Action relies on the '941 patent to remedy the deficiency.

The '941 patent is directed to an apparatus and method for locating a commercial within a video data stream that consists of a sequence of frames. The method includes keyframe filtering, in which frames that are unicolor or similar to prior frames are filtered out.¹ In the '941 patent, a block signature, which consists of a sequence of bits based on the discrete cosine transform (DCT) coefficients of the data block, is derived for each data block in a frame. For example, as shown in Figure 7, the DC transform coefficient occupies three

¹An overview of this procedure is shown in Figures 6A and 6B.

bits in the block signature, while five bits are reserved for the lowest-level AC transform coefficients. Each AC signature bit is set to 0 or 1 based on whether the corresponding AC coefficient exceeds a predetermined threshold (200 in the example shown in Figure 7).² Next, the block signature are used in conjunction with region growing and centroid finding steps to develop a "frame signature" for each frame.³ In step 616, a comparison is made of the frame signatures of two frames to determine the degree of similarity of the two frames. However, this comparison process, which the Office Action alleges relates to the judgement means of Claim 1, is unrelated to a judgement of whether the *length* of a commercial candidate block is within a predetermined range of an integral multiple of a standard length, as recited in Claim 1. The AC values referred to in the Office Action (e.g., -2400 to 2400) are discrete cosine transform values and are unrelated to time intervals.

Thus, no matter how the teachings of the '818 and '941 patents are combined, the combination does not teach or suggest the judgement means for making a judgement of whether the length of a commercial candidate block is within a predetermined range of an integral multiple of a standard length. Accordingly, Applicants respectfully submit that a *prima facie* case of obviousness has not been established and that the rejection of Claim 1 (and dependent Claims 2, 3, 6, and 7) should be withdrawn.

Independent Claims 23, 44, and 66 recite limitations analogous to the limitations recited in Claim 1. Thus, for the reasons stated above for the patentability of Claim 1, Applicants respectfully submit that a *prima facie* case of obviousness has not been established and that the rejection of Claims 23, 44, and 66 (and associated dependent Claims 24, 25, 28, 29, 45, 46, 49, 50, 67, 68, 71, and 72) should be withdrawn.

²See step 606 in Figure 6A of the '941 patent.

³See steps 608-614 in Figure 6A of the '941 patent.

Claim 18 is directed to an apparatus for processing a television signal, comprising: (1) a signal receiving means for receiving a television signal; (2) commercial extracting means for extracting a commercial based on a reference criterion indicative of a commercial characteristic; (3) alteration detecting means for detecting an alteration of the commercial characteristic; and (4) changing means for changing the reference criteria according to the alteration of the commercial characteristic detected by the alteration detecting means.

Regarding the rejection of Claim 18 under 35 U.S.C. §103(a), Applicants respectfully submit that the Office Action fails to clearly state whether the '818 patent discloses the alteration detecting means and the changing means recited in Claim 18. Moreover, the Office Action fails to indicate the manner in which the teachings of the '818 and '941 patents may be combined to create the apparatus of Claim 18, and why one of ordinary skill in the art would have been motivated to make the combination. Further, Applicants note that both the '818 and '941 patents fail to disclose a changing means for changing the reference criterion used for extracting a commercial, as recited in Claim 18. Thus, Applicants respectfully submit that a *prima facie* case of obviousness has not been established and that the rejection of Claim 18 (and dependent Claims 19-22) should be withdrawn.

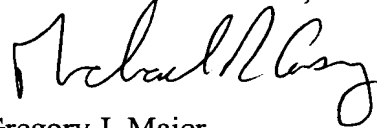
Independent Claims 40, 61, and 83 recite limitations analogous to the limitations recited in independent Claim 18. Thus, for the reasons stated above for the patentability of Claim 18, Applicants respectfully submit that a *prima facie* case of obviousness has not been established and that the rejection of independent Claims 40, 61, and 83 (and associated Claims 41-43, 62-65, and 84-87) should be withdrawn.

Thus, it is respectfully submitted that independent Claims 1, 17, 18, 23, 39, 40, 44, 60, 61, 66, 82, and 83 (and associated dependent claims) patentably define over the '818 and '941 patents.

Consequently, in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. Accordingly, the application is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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